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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,630	07/15/2003	Do-Wan Kim	1293.1907	5655

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EXAMINER

TUPPER, ROBERT S

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,630

Applicant(s)

KIM ET AL.

Examiner

Robert S Tupper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/15/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-30 are rejected under 35 U.S.C. 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The specification and drawings disclose that the head limiter is mounted on the flange of the spindle motor. There is NO disclosure of an alternative location for the limiter.

However, claims 10, 29, and 30 recite that a disk is mounted on a mounting surface and that a head limiter protrudes from the mounting surface. There is no definition of "mounting surface" in the specification. These recitations at least infer that the head limiter is mounted in a location other than the flange of the spindle motor.

These claims are inadequately disclosed under 35 USC 112 first paragraph if read literally to encompass mounting the limiter on a surface other than the flange of the spindle motor.

Alternatively, these claims are indefinite, misleading, and misdescriptive under 35 USC 112 second paragraph for failing to clearly state the location of the limiter.

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4. Claims 1-30 are further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble for all the independent claims recite a "magnetic head parking system", but the body of these claims do not contain any head parking structures. It is unclear what is being claimed. As they stand these claims are indefinite, misleading, and misdescriptive.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 10-17, 20, 23, 29, and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by KHANNA et al (5,640,290).

See the 35 USC 112 first and second paragraph rejection above, the "mounting surface" recited in these claims is being read as the base plate of the disk drive for this rejection.

Note figure 8. KHANNA et al shows a disk drive with a head limiter system that includes projections (62) located in the parking zone (see claim 2 column 9 lines 13-14) that limit the vertical movement of the head (36) and suspension (34) due to shock loading. The limiters are located both directly opposite the slider and offset from the

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slider (re claims 12 and 13). The projections are integral with the base (re claims 7 and 23). See figure 2 - the actuator has a pivot (32), arm (30), and suspension (34)(re claim 20). The base is clearly 'stepped' – i.e. has two different levels (re claim 29).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5-7, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over KHANNA et al (5,640,290).

KHANNA et al shows a disk drive with a parking system including a head limiter substantially as claimed.

KHANNA et al differs in not: (A) locating the limiter on the flange of the spindle motor (re claim 1), (B) specifying the exact range of motion allowed (re claims 5 and 21), and (C) showing the shape of the limiter (re claims 6 and 22).

Concerning (A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the limiter on the flange of the spindle motor. The motivation is as follows: KHANNA et al simply does not show the base plate and spindle motor in detail. These (whether located on the base plate or flange) are art recognized equivalents that operate in the same manner and produce the same results

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without any unexpected results. One of ordinary skill in the art would utilize either location where the patent only showed the location schematically.

Concerning (B), it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the projections to provide the listed range of motion. The motivation is as follows: KHANNA et al states that the clearance should be set "as small as possible" (see column 8 lines 3-5). Given that no specific dimensions were disclosed one of ordinary skill in the art would have routinely experimented to set this. This would have been the obvious result of routine experimentation and optimization.

Concerning (C), it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the limiter to have an upper curved surface. The motivation is as follows: KHANNA et al, again, simply does not specify the shape. Given that no specific shape was disclosed one of ordinary skill in the art would have routinely experimented to set this. This would have been the obvious result of routine experimentation and optimization.

9. Claims 4, 8, 9, 18, 19, and 24-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

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Concerning claims 4, 18, and 19, the prior art does not teach or suggest a disk drive magnetic head parking system having a head limiter located on the spindle motor flange protruding towards the disk, where the limiter is wider than the width of the head suspension.

Concerning claims 8, 9, and 24-28, the prior art does not teach or suggest a disk drive magnetic head parking system having a head limiter located on the spindle motor flange protruding towards the disk, where the limiter has a buffer member, or a buffering ability.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

IDA et al and McDONALD et al are cited for their showings of head limiter structures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert S Tupper whose telephone number is 703-308-1601. The examiner can normally be reached on Mon - Fri, 6:00 AM - 3:30 PM (first Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert S Tupper
Primary Examiner
Art Unit 2652

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